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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,152	06/27/2003	Cheol-Hee Moon	6161.0064.AA	5184

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EXAMINER
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PERRY, ANTHONY T

ART UNIT	PAPER NUMBER
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2879

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/18/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/607,152

Applicant(s)

MOON, CHEOL-HEE

Examiner

Anthony T. Perry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Newly submitted claims, 17-19, are directed to an embodiment not claimed in the originally filed application, and are independent or distinct from the invention originally claimed for the following reasons:

They require different search that is independent from the claims originally filed.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 17-19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whang et al. (US 6,373,195 in view of Nakamura (US 5,990,630) further in view of Horiuchi et al. (US 6,043,604).

Regarding claims 1, 7, 8, and 11, Whang discloses a plasma display panel, comprising: a first substrate and a second substrate that are substantially parallel and have a predetermined gap there between; a plurality of address electrodes (A1-A9) formed on a surface of the first substrate opposing the second substrate; the address electrodes (A1-A9) being provided in a line pattern and being substantially parallel with each other; a dielectric layer formed over a surface of the first substrate covering the address electrodes (A1-A9); barrier ribs formed on the dielectric layer in a lattice pattern, the barrier ribs defining discharge cells (see for example Fig. 12 and the abstract); a plurality of discharge sustain electrodes (32+33) formed on a surface of the second substrate which opposes the first substrate (13), the discharge sustain electrodes (32) being formed in a line pattern in a direction substantially perpendicular to the address electrodes (see for example Fig. 13), wherein the barrier ribs include first barrier rib members formed along a same direction as the address electrodes (A1-A9) (Fig. 12), and second barrier rib members formed along a same direction as the discharge sustain electrodes (32+33) within a space between two neighboring first barrier members, the barrier rib members defining the discharge cells to be arranged in a zigzag manner along a same direction as the address electrodes.

Whang does not specifically state that a transparent dielectric layer and a protection layer formed over the surface of the second substrate covering the discharge sustain electrodes. However, such an arrangement is conventional in the art. Nakamura teaches a dielectric layer formed over the discharge sustain electrodes and protective layer formed over the dielectric layer to protect it from the discharge (see for example col. 1, line 58 –col. 2, line 3). Accordingly, it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a dielectric layer over the sustain discharge electrodes to insulate them from one another and a protective layer over the dielectric layer to protect it from the discharge.

Whang and Nakamura do not specifically teach the entire structure of the barrier ribs including a light-absorbing material. However, Horiuchi et al. teach the barrier ribs being colored black to improve the contrast (see for example, col. 8, lines 36-46). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the barrier ribs black in color so as to improve the contrast and the overall quality of the display.

Regarding claim 2, Horiuchi et al. teach the use of copper oxide as the black pigment used in making the light absorbing barrier ribs (see col. 12, lines 39-41). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use chromium oxide as the material for producing the nontransparent barrier ribs, since the selection of known materials for a known purpose is within the skill of the art.

Reasons for combination in the rejection of claims 1, 7, 8, and 11 apply.

Regarding claim 6, Whang teaches the first barrier rib members are arranged substantially in parallel with and at locations between the address electrodes (A1-A9), and the second barrier rib members are arranged substantially in parallel with and at locations between the discharge sustain electrodes (32+33) (see for example, Figs. 12 and 13).

Regarding claim 9, Whang discloses the discharge cells are arranged in the zigzag manner by arranging the second barrier rib members defining the discharge cells in a first space defined by a first pair of neighboring first rib members such that they are not aligned with the second barrier rib members defining the discharge cells located in a second space defined by a

second pair of neighboring first rib members, wherein one rib member of the first pair of neighboring first rib members is also one of the first rib members in the second pair of neighboring first rib members (see Figs. 12 and 13).

Regarding claim 10, Whang teaches a first set of the barrier rib members is formed on a first set of the address electrodes (32+33) and a second set of the barrier rib members is formed on a second set of the address electrodes (A1-A9), wherein the second set of address electrodes includes at least one of the address electrodes which is not part of the first set of address electrodes (see Figs. 12 and 13).

Claims 3-5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya (US 6,583,560) as applied to claims 1 and 8, above, in view of Nishimura et al. (JP 2001-118512).

Regarding claims 3-5 and 12-13, Whang et al., Nakamura, and Horiuchi et al. do not specifically teach one of the sets of barrier rib members higher than the other. However, Nishimura teaches having one set of the barrier rib members higher than the other so as to increase the exhaust efficiency during manufacturing of the PDP (see for example paragraph 0008). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the sets of barrier rib members at different heights so as to increase the exhaust efficiency during manufacturing of the PDP. It is noted that having a particular set higher than the other does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select either set of the barrier rib members to be higher than the other.

***Response to Arguments***

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the teachings and motivations are found in the references themselves. Nakamura teaches a dielectric layer formed over the discharge sustain electrodes and protective layer formed over the dielectric layer to protect it from the discharge (see for example col. 1, line 58 – col. 2, line 3) and Horiuchi et al. teach the barrier ribs being colored black to improve the contrast (see for example, col. 8, lines 36-46).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### Contact Information

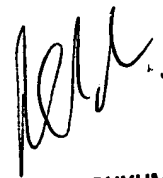
Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Perry  
Patent Examiner  
Art Unit 2879  
December 9, 2006



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